

REMARKS

The following remarks are provided in response to the Office Action mailed January 26, 2007 in which the Examiner:

- rejected claims 13, 14 and 16-31 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.
- rejected claims 13, 14 and 16-25 under 35 U.S.C. §112, second paragraph, as being indefinite.
- rejected claims 13, 14 and 16-31 under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over US 6,979,647 to Bojkov et al. (hereinafter Bojkov).
- rejected claims 13, 14 and 16-31 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15-19 of US 6,974,764.
- provisionally rejected claims 13, 14 and 16-31 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending US Application No. 10/704,498.

Claims 26 – 31 are herein canceled without prejudice. The Applicants respectfully request reconsideration of the above referenced patent application for the following reasons:

Claims 13, 14 and 16-31 rejection under 35 U.S.C. §112, first paragraph

Claims 13, 14 and 16-31 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner states that the

“claims have been amended to recite that there are two metallic films. The Examiner looked at Figure 4, the original claims and paragraphs 0023-0037 and could not find a teaching of two films.” (see p. 2 of Examiner’s response dated January 26, 2007).

The Applicants respectfully point out paragraph [0027] of the specification which reads, “In accordance with one embodiment of the invention a chelating agent is tailored to bind with atoms of a specific metal or metal alloy in order to selectively etch particular metals or alloys while leaving intact **other metal films** as well as the non-metal films.” (emphasis added). That is, a first metal film may selectively be etched selective to a second (other) metal film. Thus, the Applicants teach two films.

The Examiner states that the *“there are teachings for ‘metal and metal-based films’ which can include metal, metal oxides and metal alloys. It is not clear from the specification that metals are specifically taught.”* (see p. 2 of Examiner’s response dated January 26, 2007). The Applicants have accordingly removed reference to “specific” metals from all of the pending claims.

Therefore, claims 13, 14 and 16-25 comply with the written description requirement.

Claims 13, 14 and 16-25 rejection under 35 U.S.C. §112, second paragraph

Claims 13, 14 and 16-25 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner states that *“[t]he claims have been amended to recite two metallic films and that the photoresist layer is applied to the first metallic layer. No relation has been made clear as to which film is applied first.”*

The Applicants herein amend independent claims 13 and 18 to provide a relationship between the two metal films and respectfully request reconsideration of claims 13, 14 and 16-25 in view of the amendments. (see p. 3 of Examiner's response dated January 26, 2007).

Claim 13, 14 and 16-31 rejection under 35 U.S.C. §102(e)

Claims 13, 14 and 16-31 are rejected under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Bojkov. The Applicants herein cancel claims 26 – 31 without prejudice. The Applicants herein amend independent claims 13 and 18 (on which claims 14, 16-17 and 19-25 depend) and respectfully request reconsideration of claims 13, 14 and 16-25 in view of the amendments and the following arguments.

In claims 13, 14 and 16-25, the Applicants teach and claim a method comprising depositing a first metallic film on a substrate proximate to a second metallic film. A layer of photoresist is deposited on at least the first metallic film. The photoresist is patterned such that a desired portion of the first metallic film is masked and an undesired portion of the first metallic film is exposed. Two or more chelating agents are selected based upon the metals contained in the first metallic film. The two or more chelating agents are used to remove the undesired portion of the first metallic film, wherein the two or more chelating agents do not impair the second metallic film. That is, the Applicants teach and claim a method wherein **two or more chelating agents are used to remove a portion of first metallic film without impairing a second metallic film.**

Bojkov fails to disclose a method of removing a portion of a first metallic film with two or more chelating agents without impairing a second metallic film. Bojkov does disclose selectively etching a metal film with a single chelating agent (col. 1, line 64). The examiner argues that it would have been obvious to use more than one chelating agent if more than one metal is present because Bojkov teaches that the chelating agent is chosen dependent on the metal. (*see* pp. 4-5 of Examiner's response dated January 26, 2007). On the contrary, even if the metal film of Bojkov did contain more than one metal, a single chelating agent capable of etching all such metals may still have been used, as is well known in the art. Furthermore, the etching solution of Bojkov is always referred to as containing a chelating agent, i.e. never more than one. Therefore, Bojkov does not disclose nor suggest the use of two or more chelating agents to selectively remove a metallic film. Thus, **Bojkov does not disclose using two or more chelating agents to remove a portion of first metallic film without impairing a second metallic film**, as taught by the Applicants.

Claims 13, 14 and 16-31 rejection for nonstatutory obviousness-type double patenting

Claims 13, 14 and 16-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15-19 of 6,974,764. The Applicants herein cancel claims 26 – 31 without prejudice. The Applicants herein amend independent claims 13 and 18 (on which claims 14, 16-17 and 19-25 depend) and respectfully request reconsideration of claims 13, 14 and 16-25 in view of the amendments and the following arguments.

As described above, the Applicants teach a method wherein **two or more chelating agents are used to remove a portion of first metallic film without impairing a second metallic film**. Claims 15-19 of US 6,974,764 recite a method wherein “the exposed part of the second metal layer and the underlying part of the first metal layer” are both removed by “applying a wet etch chemistry that includes a chelating agent” (col. 10, lines 18-22). Thus, claims 13, 14 and 16-25 of the present invention are patentably distinct.

Claims 13, 14 and 16-31 rejection for nonstatutory obviousness-type double patenting

Claims 13, 14 and 16-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending US Application No. 10/704,498 (now US patent 7,129,182). The Applicants herein cancel claims 26 – 31 without prejudice. The Applicants herein amend independent claims 13 and 18 (on which claims 14, 16-17 and 19-25 depend) and respectfully request reconsideration of claims 13, 14 and 16-25 in view of the amendments and the following arguments.

As described above, the Applicants teach a method wherein **two or more chelating agents are used to remove a portion of first metallic film without impairing a second metallic film**. Claims 1-10 and 16-25 of US 7,129,182 do not recite a second metallic layer. Claims 11-15 of US 7,129,182 recite a method wherein “the exposed part of the second metal layer and the underlying part of the first metal layer” are both removed by applying “a wet chemistry that comprises . . . a hexa-dentate chelating

agent” (page 4, claim 16). That is, claims 16-20 are silent with respect to “two or more” chelating agents and with respect to etching a first metallic film without impairing a second metallic film, as taught by the Applicants. Thus, claims 13, 14 and 16-25 of the present invention are patentably distinct.

CONCLUSION

The Applicants submit that they have overcome the Examiner's rejections of the claims and that they have the right to claim the invention as set forth in the listed claims. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Pursuant to 37 C.F.R. 1.136(a)(3), Applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

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Dated

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